# PART 70 SIGNIFICANT SOURCE MODIFICATION
# OFFICE OF AIR MANAGEMENT

## Teledyne Casting Service
## 300 Philadelphia Street
## LaPorte, Indiana 46350

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

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|---|---|
| Source Modification No.: 091-10594-00018 | |
| Issued by:<br>Paul Dubenetzky, Branch Chief<br>Office of Air Management | Issuance Date: |

## TABLE OF CONTENTS

## SECTION A SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a gray iron foundry.

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| Responsible Official: | David Neil |
| Source Address: | 300 Philadelphia Street, LaPorte, Indiana 46350 |
| Mailing Address: | P.O. Box 488, LaPorte, Indiana 46352-0488 |
| Phone Number: | 219-362-1000 |
| SIC Code: | 3321 |
| County Location: | LaPorte |
| County Status: | Attainment for all criteria pollutants |
| Source Status: | Part 70 Permit Program<br>Major Source, under PSD Rules;<br>Minor Source, Section 112 of the Clean Air Act |

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to construct and operate the following emission units and pollution control devices:

(a) One (1) Didion rotary lump crusher in the High Bay Mechanical Reclamation System, equipped with a baghouse, known as C04, exhausting through Stack S04, capacity: 68.75 tons of sand per hour.

(b) Two (2) pneumatic sand transporters between the High and Center Bay Mechanical Reclamation Systems, equipped with a bin vent filter, capacity: 15 tons of sand per hour, each.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

## SECTION B GENERAL CONSTRUCTION CONDITIONS

B.1 Permit No Defense [IC 13]

This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions [326 IAC 2-7-1]

Terms in this approval shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2 and 326 IAC 2-7 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.5 Significant Source Modification [326 IAC 2-7-10.5(h)]

This document shall also become the approval to operate pursuant to 326 IAC 2-7-10.5(h) when, prior to start of operation, the following requirements are met:

(a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the emission units were constructed as proposed in the application. The emissions units covered in the Significant Source Modification approval may begin operating on the date the affidavit of construction is postmarked or hand delivered to IDEM if constructed as proposed.

(b) If actual construction of the emissions units differs from the construction proposed in the application, the source may not begin operation until the source modification has been revised pursuant to 326 IAC 2-7-11 or 326 IAC 2-7-12 and an Operation Permit Validation Letter is issued.

(c) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(d) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.

## SECTION C GENERAL OPERATION CONDITIONS

C.1 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted under this permit shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, on the attached Certification Form, with each submittal.

(c) A responsible official is defined at 326 IAC 2-7-1(34).

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this approval, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after issuance of this approval, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) PMP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM. IDEM, OAM, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this approval.

(b) Any application requesting an amendment or modification of this approval shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this approval:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.5 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided in this permit, all air pollution control equipment listed in this approval and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using good engineering practices (GEP) pursuant to 326 IAC 1-7-3.

**Testing Requirements [326 IAC 2-7-6(1)]**

C.7 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM, OAM within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAM, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]**

C.8 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Compliance with applicable requirements shall be documented as required by this permit. All monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.9 Maintenance of Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

(a) In the event that a breakdown of the monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this approval until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less than one (1) hour until such time as the continuous monitor is back in operation.

(b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

**Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]**

C.10 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5][326 IAC 2-7-6] [326 IAC 1-6]

(a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:

(1) This condition;

(2) The Compliance Determination Requirements in Section D of this approval;

(3) The Compliance Monitoring Requirements in Section D of this approval;

(4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this approval; and

(5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this approval. CRP's shall be submitted to IDEM, OAM upon request and shall be subject to review and approval by IDEM, OAM. The CRP shall be prepared within ninety (90) days after issuance of this approval by the Permittee and maintained on site, and is comprised of:

(A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this approval; and

(B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.

(b) For each compliance monitoring condition of this approval, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the approval unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.

(c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:

(1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the approval conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the approval, and such request has not been denied or;

(3) An automatic measurement was taken when the process was not operating; or

(4) The process has already returned to operating within "normal" parameters and no response steps are required.

(d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

C.11 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this approval exceed the level specified in any condition of this approval, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate approval conditions may be grounds for immediate revocation of the approval to operate the affected facility.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

C.12 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

(c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

(d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.13 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]

(a) With the exception of performance tests conducted in accordance with Section C- Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this approval shall be performed at all times the equipment is operating at normal representative conditions.

(b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this approval is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this approval.

(c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

(d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

(e) At its discretion, IDEM, may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

(f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.14 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

(a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Records of required monitoring information shall include, where applicable:

(1) The date, place, and time of sampling or measurements;

(2) The dates analyses were performed;

(3) The company or entity performing the analyses;

(4) The analytic techniques or methods used;

(5) The results of such analyses; and

(6) The operating conditions existing at the time of sampling or measurement.

(c) Support information shall include, where applicable:

(1) Copies of all reports required by this approval;

(2) All original strip chart recordings for continuous monitoring instrumentation;

(3) All calibration and maintenance records;

(4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

(d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of approval issuance.

C.15 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

(a) The reports required by conditions in Section D of this approval shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(b) Unless otherwise specified in this approval, any notice, report, or other submission required by this approval shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

(c) Unless otherwise specified in this approval, any semi-annual report shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) The first report shall cover the period commencing on the date of issuance of this approval and ending on the last day of the reporting period.

**SECTION D.1 FACILITY OPERATION CONDITIONS**

Facility Description [326 IAC 2-7-5(15)]

(a) One (1) Didion rotary lump crusher in the High Bay Mechanical Reclamation System, equipped with a baghouse, known as C04, exhausting through Stack S04, capacity: 68.75 tons of sand averaged over 24 hours per hour.

(b) Two (2) pneumatic sand transporters between the High and Center Bay Mechanical Reclamation Systems, equipped with a bin vent filter, capacity: 15 tons of sand per hour, each.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

D.1.1 Particulate Matter (PM) [326 IAC 2-2]

In order to avoid the applicability of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)),

(a) The total PM emission rate after controls for the Didion lump crusher, transporters and the rotoconditioner covered in this permit and CP 091-10136 shall be less than 5.48 pounds per hour average over three (3) hours.

(b) The PM emission rate limitation in (a) is less than twenty-five (25) tons per twelve (12) month period, rolled monthly

D.1.2 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3 (Process operations), the allowable PM emission rate from:

(a) The lump crusher shall not exceed 47.6 pounds per hour when operating at a process weight rate of 68.75 tons per hour.

(b) The pounds per hour emission limitations for the lump crusher were calculated with the following formula:

Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

(c) The two (2) sand transporters shall not exceed 25.2 pounds per hour PM each when operating at a process weight rate of 15.0 tons of metal (sand) per hour.

(d) The pounds per hour emission limitations were calculated with the following formula:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

D.1.3 $PM_{10}$ [326 IAC 2-2]

In order to avoid the applicability of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)),

(a) The total $PM_{10}$ emission rate after controls for the Didion lump crusher, transporters and the rotoconditioner covered in this permit and CP 091-10136 shall be less than 3.40 pounds per hour average over three (3) hours.

(b) The $PM_{10}$ emission rate limitation in (a) is less than fifteen (15) tons per twelve (12) month period, rolled monthly.

D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the lump crusher and the CO4 baghouse.

**Compliance Determination Requirements**

D.1.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

Within sixty (60) days after achieving maximum production rate, but not later than the date of the performance test required by Operation Condition 17 of CP 091-10136-00018, issued April 21, 1999, the Permittee shall perform PM and $PM_{10}$ testing for the baghouse Stack S04 utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for $PM_{10}$, or other methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. $PM_{10}$ includes filterable and condensible $PM_{10}$. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

D.1.6 Particulate Matter (PM)

(a) The baghouse, CO4, for PM control shall be in operation at all times when the lump crusher is in operation and exhausting to the outside atmosphere.

(b) The bin vent filter, for PM control shall be in operation at all times when either of the two (2) pneumatic sand transporters are in operation and exhausting to the outside atmosphere.

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

D.1.7 Visible Emissions Notations

(a) Daily visible emission notations of the S04 stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.1.8 Parametric Monitoring

The Permittee shall take readings of the total static pressure drop across the C04 baghouse, at least once daily when the Mechanical Sand Reclamation System is in operation and vented to the atmosphere. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 4.0 and 9.0 inches of water. The Preventive Maintenance Plan for this baghouse shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of this range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

D.1.9 Baghouse Inspections

An inspection shall be performed each calender quarter of all bags controlling the lump crusher when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.1.10 Broken or Failed Bag Detection

In the event that bag failure has been observed.

(a) For multiple compartment baghouses, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For single compartment baghouses failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

**Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

D.1.11 Record Keeping Requirements

(a) To document compliance with Condition D.1.7, the Permittee shall maintain records of daily visible emission notations of the stack S04 exhaust.

(b) To document compliance with Condition D.1.8, the Permittee shall maintain the following:

(1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:

(A) Inlet and outlet differential static pressure; and

(B) Cleaning cycle: frequency or predetermined differential pressure high set point and differential pressure

(2) Documentation of all response steps implemented, per event .

(3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.

(4) Quality Assurance/Quality Control (QA/QC) procedures.

(5) Operator standard operating procedures (SOP).

(6) Manufacturer's specifications or its equivalent.

(7) Equipment "troubleshooting" contingency plan.

(8) Documentation of the dates vents are redirected.

(c) To document compliance with Condition D.1.9, the Permittee shall maintain records of the results of the inspections required under Condition D.1.9 and the dates the vents are redirected.

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
# OFFICE OF AIR MANAGEMENT
## COMPLIANCE DATA SECTION

### PART 70 SOURCE MODIFICATION CERTIFICATION

Source Name: Teledyne Casting Service
Source Address: 300 Philadelphia Street, LaPorte, Indiana 46350
Mailing Address: P.O. Box 488, LaPorte, Indiana 46352-0488
Source Modification No.: 091-10594-00018

**This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.**

Please check what document is being certified:

**9** Test Result (specify) _____

**9** Report (specify) _____

**9** Notification (specify) _____

**9** Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

## MALFUNCTION REPORT

### INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
### OFFICE OF AIR MANAGEMENT
**FAX NUMBER - 317 233-5967**

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES ?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100 TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: Teledyne Casting Service PHONE NO. : 219-362-1000
LOCATION: (CITY AND COUNTY) LaPorte / LaPorte
PERMIT NO. 091-10594 AFS PLANT ID: 091-00018 AFS POINT ID: _____ INSP: _____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: _____/_____/ 19_____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ 19____ _____ AM / PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: _____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____
INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

MALFUNCTION REPORTED BY: _____ TITLE: _____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

**Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.**

**326 IAC 1-6-1 Applicability of rule**

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

**326 IAC 1-2-39 "Malfunction" definition**

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

*** Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

_____

_____

# Indiana Department of Environmental Management
# Office of Air Management

## Technical Support Document (TSD) for a Source Modification to a Part 70 Operating Permit

**Source Background and Description**

| | |
|---|---|
| **Source Name:** | **Teledyne Casting Service** |
| **Source Location:** | **300 Philadelphia Street, LaPorte, Indiana 46350** |
| **County:** | **LaPorte** |
| **SIC Code:** | **3321** |
| **Operation Permit No.:** | **T 091-6141-00018** |
| **Operation Permit Issuance Date:** | **Yet To Be Issued** |
| **Source Modification No.** | **091-10594-00018** |
| **Permit Reviewer:** | **Frank P. Castelli** |

The Office of Air Management (OAM) has reviewed a modification application from Teledyne Casting Service relating to the operation of a Didion lump crusher in the High Bay Mechanical Reclamation System and two (2) pneumatic sand transporters between the High and Center Bay Mechanical Reclamation Systems. The proposed new equipment is as follows:

(a) One (1) Didion rotary lump crusher in the High Bay Mechanical Reclamation System, equipped with a baghouse, known as C04, exhausting through Stack S04, capacity: 68.75 tons of sand per hour.

(b) Two (2) pneumatic sand transporters between the High and Center Bay Mechanical Reclamation Systems, equipped with a bin vent filter, capacity: 15 tons of sand per hour, each.

**History**

On February 1, 1999, Teledyne Casting Service submitted an application to the OAM requesting to add a Didion lump crusher to the High Bay Mechanical Reclamation System and two (2) pneumatic sand transporters between the High and Center Bay Mechanical Reclamation Systems. The combination of this modification and the modification proposed in CP-091-10136 for a rotoconditioner results in this modification being considered a significant modification because the total potential PM emissions before control exceed 25 tons per year. The potential PM emissions from the two (2) modifications have been combined because the rotoconditioner is located in the Center Bay Mechanical Reclamation System and it exhausts through the same baghouse stack (S04) as the proposed modification for the lump crusher and the applications for both modifications were received within one (1) year of each other.

**Existing Approvals**

The source applied for a Part 70 Operating Permit on June 17, 1996. The source has been operating under previous approvals for the High Bay Mechanical Reclamation System including, but not limited to, the following:

(a) CP 091-1737, issued on December 6, 1990 and

(b) CP 091-2238 issued on January 21, 1994.

**Air Pollution Control Justification as an Integral Part of the Process**

The company has submitted the following justification that the bin filter be considered as an integral part of the pneumatic sand transporters.

(a) The bin vent filter is necessary for the normal operation of the pneumatic sand transporters. The pneumatic transporters operate by blowing sand from one silo to another by using compressed air.

(b) The sand transporters and pipes are completely enclosed.

(c) Any filter build-up or holes in the filters would interfere with the pneumatic transport of sand.

IDEM, OAM has evaluated the justifications and agreed that the air pollution control equipment will be considered as an integral part of the sand transporting process. Therefore, the permitting level will be determined using the potential to emit after the bin vent filter. Operating conditions in the proposed permit will specify that this bin vent filter shall operate at all times when the sand transporting process is in operation.

**Enforcement Issue**

There are no enforcement actions pending.

**Stack Summary**

| Stack ID | Operation | Height (feet) | Diameter (feet) | Flow Rate (acfm) | Temperature (EF) |
|---|---|---|---|---|---|
| SO4 | Lump Crusher | 40.0 | 5.0 | 66,500 | 112 |

**Recommendation**

The staff recommends to the Commissioner that the Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on February 1, 1999. Additional information was received on March 22, 1999.

**Emission Calculations**

See pages 1 and 2 of 2 of Appendix A of this document for detailed emissions calculations.

**Potential To Emit**

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

| Pollutant | Potential To Emit (tons per year) |
|---|---|
| PM | 13.3 |
| $PM_{10}$ | 13.2 |
| $SO_2$ | 0.000 |
| VOC | 0.000 |
| CO | 0.000 |
| $NO_X$ | 0.000 |

| HAPS | Potential To Emit (tons per year) |
|---|---|
| None | |

(a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM from this modification (13.2 tons per year) combined with the proposed modification under CP 091-10136 (182 tons per year) is equal to or greater than 25 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-1. IAC 2-7.

(b) Fugitive Emissions

Since this type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-2 the fugitive particulate matter (PM) emissions are counted toward determination of PSD applicability.

**Source Status**

Existing Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

| Pollutant | Emissions (tons per year) |
|---|---|
| PM | 85.84 |
| $PM_{10}$ | 100.61 |
| $SO_2$ | 15.7 |
| VOC | 202.4 |
| CO | 525.6 |
| $NO_X$ | 262.8 |

(a) This existing source is a major stationary source because it is in one of the 28 listed source categories and at least one regulated pollutant is emitted at a rate of 100 tons per year or more.

(b) These emissions were based on Facility Quick Look Report, dated March 30, 1998.

**Proposed Modification**

PTE from the proposed modification (based on 8,760 hours of operation per year at rated capacity including enforceable emission control and production limit, where applicable):

| Pollutant | PM (tons/yr) | $PM_{10}$ (tons/yr) | $SO_2$ (tons/yr) | VOC (tons/yr) | CO (tons/yr) | $NO_X$ (tons/yr) |
|---|---|---|---|---|---|---|
| Proposed Modification | 2.93 | 2.85 | 0.00 | 0.00 | 0.00 | 0.00 |
| Contemporaneous Increases | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Contemporaneous Decreases | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Net Emissions | 2.93 | 2.85 | 0.00 | 0.00 | 0.00 | 0.00 |
| PSD Significant Level | 25 | 15 | 40 | 40 | 100 | 40 |

The combination of this modification to an existing major stationary source with the modification permitted under CP 091-10136-00018, issued on April 21, 1999, is not major because the total increase in emissions is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

**Part 70 Permit Determination**

326 IAC 2-7 (Part 70 Permit Program)

This existing source has submitted their Part 70 (T-091-6141-00018) application on June 17, 1996. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

**County Attainment Status**

The source is located in LaPorte County.

| Pollutant | Status |
|---|---|
| $PM_{10}$ | attainment |
| $SO_2$ | attainment |
| $NO_2$ | attainment |
| Ozone | attainment |
| CO | attainment |
| Lead | attainment |

Volatile organic compounds (VOC) and oxides of nitrogen ($NO_X$) are precursors for the formation of ozone. Therefore, VOC and $NO_X$ emissions are considered when evaluating the rule applicability relating to the ozone standards. LaPorte County has been designated as attainment or unclassifiable for ozone.

**Federal Rule Applicability**

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

**State Rule Applicability - Entire Source**

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

The total PM and $PM_{10}$ emissions from this proposed lump crusher and the two (2) sand transporters, combined with the rotoconditioner emissions covered under CP 091-10136, will be limited as follows in order to avoid the applicability of this rule. The emissions from both of the modifications have been combined because the rotoconditioner in CP 091-10136 and the lump crusher are both controlled by the same baghouse (C04) and exhaust through stack S04. The applications for both modifications were received within one (1) year of one another.

(a) The total PM emission rate after controls for the Didion lump crusher, transporters and the rotoconditioner covered in this permit and CP 091-10136 shall be less than 5.48 pounds per hour average over three (3) hours.

(b) The PM emission rate limitation in (a) is less than twenty-five (25) tons per twelve (12) month period, rolled monthly.

(c) The total $PM_{10}$ emission rate after controls for the, Didion lump crusher, transporters and the rotoconditioner covered in this permit and CP 091-10136 shall be less than 3.40 pounds per hour average over three (3) hours.

(d) The $PM_{10}$ emission rate limitation in (c) is less than fifteen (15) tons per twelve (12) month period, rolled monthly.

326 IAC 2-6 (Emission Reporting)

This facility is subject to 326 IAC 2-6 (Emission Reporting), because the source has the potential to emit more than 100 tons per year of $PM_{10}$ in LaPorte County. Pursuant to this rule, the owner/operator of this facility must annually submit an emission statement of the facility. The annual statement must be received by July 1 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

326 IAC 5-1 (Opacity)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

**State Rule Applicability - Individual Facilities**

326 IAC 6-3-2 (Particulate Emission Limitations)

(a) The lump crusher shall comply with 326 IAC 6-3-2(c). For process weights in excess of sixty thousand (60,000) pounds per hour, $E = 55.0 P^{0.11} - 40$. The allowable PM emissions based on a process weight rate (P) of 68.75 tons per hour of sand is 47.6 pounds per hour. Since the maximum controlled PM emission rate is 0.627pounds per hour, the lump crusher complies with the rule by using the baghouse.

(b) The two (2) sand transporters shall comply with 326 IAC 6-3-2(c). For process weights in less than sixty thousand (60,000) pounds per hour, $E = 4.1 P^{0.67}$. The allowable PM emissions based on a process weight rate (P) of 15.0 tons per hour of sand each is 25.2 pounds per hour. Since the maximum controlled PM emission rate is 0.089 pounds per hour, each sand transporter complies with the rule by using its integral bin vent filter.

**Compliance Requirements**

Permits issued under 326 IAC 2-7are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

The lump crusher has applicable compliance monitoring conditions as specified below:

(a) Daily visible emissions notations of the stack exhaust (S04) shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

(b) The Permittee shall record the total static pressure drop across the baghouse (C04) controlling the lump crusher, at least once daily when the shot blasting system is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 4.0 to 9.0 inches of water or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range for any one reading.

These monitoring conditions are necessary because:

The baghouse must operate properly to avoid the requirements of 326 IAC 2-2 and comply with 326 IAC 2-7 (Part 70).

**Air Toxic Emissions**

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Part 70 Application Form GSD-08.

None of the listed air toxics will be emitted from this source modification.

**Conclusion**

The operation of the Didion lump crusher and the two (2) pneumatic sand transporters shall be subject to the conditions of the attached proposed Source Modification No. 091-10594-00018.

# Indiana Department of Environmental Management
# Office of Air Management

## Addendum to the
## Technical Support Document for New Construction and Operation

**Source Name:** **Teledyne Cast Parts**
**Source Location:** **300 Philadelphia Street, LaPorte, Indiana 46350**
**County:** **LaPorte**
**Construction Permit No.:** **091-10594-00018**
**SIC Code:** **3321**
**Permit Reviewer:** **Frank P. Castelli**

On May 27, 1999, the Office of Air Management (OAM) had a notice published in the LaPorte Herald-Argus, LaPorte, Indiana, stating that Teledyne Cast Parts had applied for a construction permit to construct and operate a gray iron foundry and ductile iron foundry with control. The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On June 29, 1999, Laurie Ropel of Teledyne Cast Parts submitted comments on the proposed permit. The comments and corresponding responses are as follows: The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language is **bolded)**:

**Comment 1:**

D.1.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

Within sixty (60) days after achieving maximum production rate, but not later than the date of the performance test required by Operation Condition 17 of CP 091-10136-00018, issued April 21, 1999, the Permittee shall perform PM and $PM_{10}$ testing for the baghouse Stack S04 utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for $PM_{10}$, or other methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration *if the last stack test result is within 20% of a regulatory or permit limit.* $PM_{10}$ includes filterable and condensable $PM_{10}$. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

Reason for the Change: Stack testing every five years when the previous stack test results were less than 80% of a permit or regulatory limit would be unnecessarily burdensome.

**Response 1:**

The stack testing requirement has not been revised as suggested to eliminate additional testing when testing shows that the emission unit was within twenty percent (20%) of the applicable limits since there is no guarantee that after five (5) years the emission would still be in compliance regardless of the results of the initial test. The source may request deletion of the stack testing condition when applying for a renewal of the Part 70 Operating Permit.

**Comment 2:**

D.1.8 Parametric Monitoring

The Permittee shall take readings of the total static pressure drop across the C04 baghouse, at least once daily when the *Mechanical Sand Reclamation System* is in operation and vented to the atmosphere. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 4.0 and 9.0 inches of water. The Preventive Maintenance Plan for this baghouse shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of this range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

Reason for the Change: The lump crusher would be installed in the mechanical sand reclamation system. Record keeping would be simplified and equally representative of baghouse operating conditions if the requirement would be revised as shown above.

**Response 2:**

Condition D.1.8 has been changed as requested to require daily record keeping of the total static pressure drop across the C04 baghouse whenever the Mechanical Sand Reclamation System is in operation as shown below:

D.1.8 Parametric Monitoring

The Permittee shall take readings of the total static pressure drop across the C04 baghouse, at least once daily when the ~~lump crusher~~ **Mechanical Sand Reclamation System** is in operation and vented to the atmosphere. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 4.0 and 9.0 inches of water. The Preventive Maintenance Plan for this baghouse shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of this range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

**Comment 3:**

D.1.9 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the *lump crusher* when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

**Response 3:**

Condition D.1.9 has been corrected to cite the lump crusher as follows:

D.1.9 Baghouse Inspections

An inspection shall be performed each calender quarter of all bags controlling the ~~woodworking operation~~ **lump crusher** when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

**Comment 4:**

D.1.10 Broken or Failed Bag Detection

In the event that bag failure has been observed.

(a) *For multiple compartment baghouses,* ~~T~~the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For single compartment baghouses, *if the failure results in a significant drop in the baghouse's pressure readings with abnormal visible emissions or if the failure results in an opacity violation*, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Otherwise, corrective actions will be devised within twenty-four (24) hours of discovery and will include a timetable for completion.

Reason for the change: The draft permit conditions D.1.10 (a) and (b) are unclear since the method of determining a bag failure is not defined. Based upon the resolution of TCS's appeal of the Wire Feeder Construction Permit (CP 091-10023-00018) condition regarding bag failure, it is TCS's understanding that an observation of a minor amount of particulate matter emanating from the baghouse controlling the rotoconditioner does not necessarily mean that "a bag failure has been observed." Rather, it is TCS's understanding that the permit conditions pertaining to bag failure shall be followed if there has been either a significant drop in the baghouse's pressure readings with abnormal visible emissions, or the amount of particulate being emitted exceeds opacity limitations. Therefore, TCS proposes the revised permit conditions D.1.10 (a) and (b) above, which satisfies compliance monitoring requirements in 326 IAC 2-7-6 (1) and 326 IAC 2-7-5 (3).

**Response 4:**

Condition D.1.10(a) has been revised as suggested to clarify that this condition pertains to multiple compartment baghouses as follows:

D.1.10 Broken or Failed Bag Detection

In the event that bag failure has been observed.

(a) **For multiple compartment baghouses, t**~~T~~he affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Condition D.1.10(b) has not been revised since the condition already contains a provision defining when it is not necessary to shut down the failed units and associated processes. As stated in the condition this is explained in Section B - Emergency Provisions.

**Comment 5:**

D.1.11 Record Keeping Requirements

(b) To document compliance with Condition D.1.8, the Permittee shall maintain the following:

(1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:

(A) Inlet and outlet differential static pressure; and

(B) Cleaning cycle: ~~frequency and~~ differential pressure

Reason for the change: TCS requests that IDEM delete cleaning cycle frequency from Record Keeping Requirements because baghouse C04 uses the more technologically sophisticated photohelic gauge to activate its cleaning cycles rather than the standard timer. The photohelic gauge displays the pressure drop across the baghouse and activates the cleaning cycle automatically when the pressure drop across the baghouse reaches a predetermined high set point. The cleaning cycle stops when the pressure drop across the baghouse reaches the predetermined low set point. Alternatively, a timer activates the cleaning cycle at a predetermined timed frequency. Thus, documentation of daily pressure drop across the baghouse would be sufficient to demonstrate that the bags are being cleaned and properly maintained when using a photohelic gauge to activate the cleaning cycle.

**Response 5:**

The record keeping requirements in Condition D.1.11(b) of the cleaning cycle frequency has been changed as follows due to the automatic initiation of the cleaning cycle due to the photohelic gauge:

D.1.11 Record Keeping Requirements

(b) To document compliance with Condition D.1.8, the Permittee shall maintain the following:

(1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:

(A) Inlet and outlet differential static pressure; and

(B) Cleaning cycle~~:~~ frequency **or predetermined differential pressure high set point** and differential pressure

(2) Documentation of all response steps implemented, per event .

(3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.

(4) Quality Assurance/Quality Control (QA/QC) procedures.

(5) Operator standard operating procedures (SOP).

(6) Manufacturer's specifications or its equivalent.

(7) Equipment "troubleshooting" contingency plan.

(8) Documentation of the dates vents are redirected.

**Comment 6:**

TECHNICAL SUPPORT DOCUMENT PAGE Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions for the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Part 70 Application Form GSD-08.

None of the listed air toxics will be emitted ~~from~~ **as a result of** this source modification.

Reason for the change: No HAP emissions would be emitted from the lump crusher or transporters that would not otherwise be emitted. Trace amounts of HAPs emitted during sand cooling may be detected in ductwork venting the lump crusher as a result of the pouring and shakeout processes.

**Response 6:**

It is noted that none of the listed air toxics will be emitted as a result of this modification.

# Potential Emissions Calculations

**Company Name:** Teledyne Casting Service
**Address City IN Zip:** 300 Philadelphia Street, LaPorte, Indiana 46350
**Source Modification No.** 091-10594
**Plt ID:** 091-00018
**Reviewer:** Frank P. Castelli
**Date:** February 1, 1999

**Emission Unit:** Didion Rotary Lump Crusher (Stack S04)
Part of the High Bay Sand Reclamation System

| Pollutant | Maximum Rate (tons/hr) | Emission Factor (lbs/tons) | Uncontrolled Emission Rate (lbs/hr) | Uncontrolled Emission Rate (tons/year) | Overall Control Efficiency (%) | Controlled Emission Rate (lbs/hr) | Controlled Emission Rate (tons/year) | Allowable Emission Rate (lbs/hr) |
|---|---|---|---|---|---|---|---|---|
| PM | 13.75 | 0.218 | 3.00 | 13.1 | 79.09% | 0.627 | 2.75 | 47.6 |
| PM10 | 13.75 | 0.218 | 3.00 | 13.1 | 79.09% | 0.627 | 2.75 | |

**13.75 tons per hour is the maximum melt rate of metal and the process weight rate is 68.75 tons of sand per hour.**

Allowable PM emission are pursuant to 326 IAC 6-3-2 calculated by the equation PM = 55*P^^0.11-40

Emission factors from engineering estimate of 1% of entire Title V approved emission rate of 21.8 pounds per ton of metal throughput, total, for the total mechanical reclamation process
Note: No HAPs

# Potential Emissions Calculations

**Company Name:** Teledyne Casting Service
**Address City IN Zip:** 300 Philadelphia Street, LaPorte, Indiana 46350
**Source Modification No.** 091-10594
**Plt ID:** 091-00018
**Reviewer:** Frank P. Castelli
**Date:** February 1, 1999

**Emission Unit** Two (2) Pneumatic Sand Transporters

| Pollutant | Maximum Rate (tons/hr) | Emission Factor (lbs/tons) | Uncontrolled* Emission Rate (lbs/hr) | Uncontrolled* Emission Rate (tons/year) | Overall Control Efficiency (%) | Controlled Emission Rate (lbs/hr) | Controlled Emission Rate (tons/year) | Allowable Emission Rate (lbs/hr) | |
|---|---|---|---|---|---|---|---|---|---|
| PM | 30.00 | 0.270 | 8.10 | 35.5 | 99.50% | 0.040 | 0.177 | 25.2 | Each |
| PM-10 | 30.00 | 0.157 | 4.71 | 20.6 | 99.50% | 0.024 | 0.103 | | |

30.0 tons/hour is the maximum total sand transport rate, 15.0 tons/hour for each transporter.

* Since the bin filter is deemed an integral control device of the pneumatic sand transporters, the potential emissions after controls are used for all determinations.

Allowable PM emission are pursuant to 326 IAC 6-3-2 calculated by ther equation PM = 4.1*P^^0.67

Emission factors from Table 11.12-2 of AP-42 for cement unloading to an elevated storage silo which are conservative for this sand process.
Note: No HAPs